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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,364	01/22/2001	Trung Nguyen	SPLX.P0051	2537

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EXAMINER

KERVEROS, JAMES C

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/767,364

Applicant(s)

NGUYEN ET AL.

Examiner

JAMES C KERVEROS

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-11 are pending and are hereby presented for examination, in response to the AMENDMENT filed 5/17/2004.
2. The disclosure objection, for not complying with the preferred layout of the specification, is hereby withdrawn in view of the amendment to the specification.
3. The Claim Objection, for minor informalities, is hereby withdrawn in view of the amendment to the claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 9 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Straver et al. (US 4890066) in view of Kobayashi (US 6556535).

Regarding Claims 1-7, 9 and 10, Straver substantially discloses an envelope detector for generating a full-wave rectified signal in response to a differential input signal (Is-Ic) FIG. 2, comprising:

Means differential amplifier (A), for converting the differential input signal (Is-Ic), into a pair of current signals (i1-i2) and the reference voltage (+Vb) to a reference current (I1-I2), as shown in FIG. 2.

Art Unit: 2133

Straver does not disclose comparing means to determine if the differential input signal ($I_s - I_c$) is greater than the reference current ($I_1 - I_2$), and indicating means for indicating the differential signal is valid when it is greater than the reference. Kobayashi, in an analogous art, discloses (FIG. 1) an envelope detector 9 including a comparator 12, which compares the output signal of the amplifier 10 and the reference erasing power value and delivers the result of comparison to the current amplifier 13, which sets an amount of laser diode 14. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate a comparator 12 and indicating means diode 14, as taught by Kobayashi, in the envelop detector of Straver, for the purpose of determining the differential input signal, since the reference of the comparator can be adjusted accordingly to respond to variations of the differential input signal, thus resulting in a more reliable envelope detection.

Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Straver et al. (US 4890066) in view of Kobayashi (US 6556535), as applied to claims 6 and 9 above, and further in view of Shade et al. (US 4809554).

Regarding Claims 8 and 11, the combined reference of Straver and Kobayashi Straver fails to disclose a Schmitt trigger responsive to the output signal, wherein the output signal is passed through the Schmitt trigger having trigger levels set further apart than a change in the output signal during the switching interval. However, Shade, in an analogous art, discloses (FIG. 1) an envelope detector 29 including a full-wave rectifier 26 coupled to a low-pass filter 36 with the output connected to the input of Schmitt trigger 38. It would have been obvious to a person having ordinary skill in the art at the

Art Unit: 2133

time the invention was made to modify the combined device of Straver and Kobayashi, by connecting the output stage of its filter to a Schmitt trigger, as taught by Shade, for the purpose of detecting the output level corresponding to the differential input signal, since the Schmitt trigger acts as background average device by smoothing the measured points, thus resulting in the reduction of unwanted background noise and erratic measurements.

Response to Arguments

5. Applicant's arguments filed 5/17/2004 have been fully considered but they are not persuasive. Claims 1-7, 9 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Straver et al. (US 4890066) in view of Kobayashi (US 6556535), and Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Straver et al. (US 4890066) in view of Kobayashi (US 6556535), as applied to claims 6 and 9 above, and further in view of Shade et al. (US 4809554), as set forth in the present Office Action.

6. Applicants argues, on page 9, that the cited references fail to disclose, teach, or even suggest the limitations of claim 1: (a) converting a reference voltage to a reference current; (b) comparing a reference current to a differential current; and (c) converting a differential input signal to a differential current.

In response to applicant's argument that the referenced 20 amplifier discloses currents 11 and 12 as two separate currents and does not suggest combining them into a single reference current, clearly, the examiner stated in the Office Action above that the cited reference Straver et al. (US 4890066) discloses a differential amplifier (A), for

Art Unit: 2133

converting the differential input signal ($I_s - I_c$), into a pair of current signals ($i_1 - i_2$) and the reference voltage ($+V_b$) to a reference current ($I_1 - I_2$), as shown in FIG. 2. The

Applicant merely recites in claim 1, "means for converting the differential input signal to a differential current $IDP - IDN$ and the reference voltage to a reference current $IREF$ ".

However, nowhere is recited in the claim "combining the reference current ($I_1 - I_2$) into a single reference current". Therefore, the above arguments do not carry any patentable weight, since they are not part of the claims. Furthermore, Straver et al. (US 4890066) discloses a full-wave rectifier circuit comprising a pair of half-wave rectifiers (HWR1, HWR2) for half-wave rectifying the pair of current signals, coupled to a combining stage (S) for indirectly combining reference current ($I_1 - I_2$), see Abstract and Figure 2.

With respect to Applicant's arguments that the cited references fail to disclose comparing a reference current to a differential current, the Examiner already conceded that Straver fails to disclose the comparing step. However, Kobayashi, in an analogous art, discloses (Figure 1) an envelope detector 9 including a comparator 12, which compares the output signal of the amplifier 10 and the reference erasing power value which generates reference constant current and delivers the result of comparison to the current amplifier 13. In a prior art, Figure 4, Kobayashi describes, "the reference erasing power value generator 160 feeds a constant current to the current amplifier 170". Clearly, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the comparator of Kobayashi in order to

Art Unit: 2133

compare two current values, such as a reference current with a differential current, for the obvious and motivation reasons stated above.

Applicant argues that the cited references, neither separately nor through their piecemeal hindsight combination, disclose, teach, or even suggest such an envelope detector. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

The Applicant argues that cited references do not disclose teach or even suggest converting a "differential input signal to a differential current". The Applicant further argues that the currents (I_s and I_c) are disclosed as two separate single ended signals and that a differential signal is distinct from a single ended signal in that the value of a differential signal is the difference between the individual values of each of its signals.

In response to applicant's argument, the Office Action states that Straver et al. (US 4890066) discloses a differential amplifier (A) for converting the differential input signal ($I_s - I_c$), into a pair of current signals ($i_1 - i_2$). Furthermore, nowhere is recited in the claim "combining the reference current ($I_1 - I_2$) into a single reference current".

Art Unit: 2133

Therefore, the above arguments do not carry any patentable weight, since they are not part of the claims.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "combining the reference current (I1-I2) into a single reference current") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

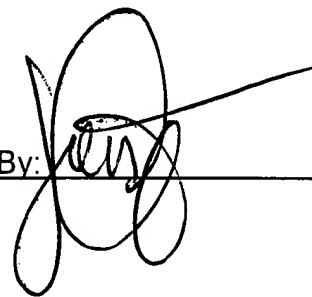
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES C KERVEROS whose telephone number is (703) 305-1081. The examiner can normally be reached on 9:00 AM TO 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (703) 305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

U.S. PATENT OFFICE
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Date: 4 October 2004
Office Action: Final Rejection

By: 

JAMES C KERVEROS
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Art Unit 2133



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PRIMARY EXAMINER